Attachment B

GCCS Engineering
Year 2000 Assessment Checklist

Name of System_____

Planned or Actual Replacement Date of System_____

YES	NO		Does this apply to your system?
____	____	1.	All dates are shown and stored as CCYY (i.e. 1999, 2000)
____	____	2.	All sorting and searching of data by date uses the CCYY format.
____	____	3.	Magic numbers do not rely on date fields or do not cause time/date problems when accessed at the turn of the century
____	____	4.	The CCYY format is used for date dependent activation/deactivation of: passwords, accounts, commercial licenses.
____	____	5.	The CCYY format is used for representing the operating system's file system
____	____	6.	If a random number generator uses a date field as a seed, it is ok when the turn of the century occurs.
____	____	7.	If date dependencies occur in encryption/decryption algorithms, the algorithms will still work correctly at the turn of the century.
____	____	8.	All segments that access the firmware for date ensure that date information is received in CCYY format.
____	____	9.	Restrict data entry clerks from entering the date as '00.
____	____	10.	Ensure date calculations are performed correctly (i.e. 1901 is before 2000). Calculate date based on starting date and plus or minus duration Calculate day of week, day of month, week of year, and month of year Convert between various date representations Ensure that variables that do not use standard date fields correctly handle date manipulation Store, retrieve, and display date data
____	____	11.	Dates are not hard coded as "19", "98", "99", "00" in date formulas.
____	____	12.	Inventory records are not discarded or rejected as being to old in "00".
____	____	13.	Dates are correctly calculated across the 01/01/2000, affecting tracking programs, time elapsed calculations, and aging calculations.
____	____	14.	Date formats stored internally do not use unconventional base date with an offset of the number of seconds/minutes/hours/days/weeks since that base date (GPS has this problem).
____	____	15.	Register overflow date calculations of base dates plus offsets (Consider the size of the data type that is used to store the offset: 8-bit, 16-bit, 32-bit, 64-bit, other)
____	____	16.	Check to ensure that 9/9/99 does not flag for record deletion
____	____	17.	Ensure that 2/29/00 is a valid date
____	____	18.	A roll-over test was performed where your system date is set to 12/31/1999, the system turned off to allow roll over of century, then turned back on to check dates.
____	____	19.	Dates are not stored using unconventional data names, or names "overlaid" or "equated"

Attachment B

GCCS Engineering

Year 2000 Assessment Checklist, continued

to your data names of year, yr, date, century, time, mmddyy, mmddyyyy, ddmmyy, ddmmyyyy, yyddd, yyyydd, clock, time_in, time_out, ssent, received, age, purge, expire, nineteen, twenty, elapsed; or combinations of these and other terms such as xxx_year, year_xxx, etc.

____ ____ 20. Leap years are calculated correctly:

February 29,2000 is recognized as a valid date

Julian date 00060 is recognized as February 29,2000

Julian date 00366 is recognized as December 31, 2000

Arithmetic operation recognize Year 2000 has 366 days

Failure to calculate for Leap Years using all three required rules:

- If the year is divisible by 4, it is a leap year, UNLESS
- The year is also divisible by 100, then it's not a leap year, UNLESS
- The year is also divisible by 400, then it is a leap year

(So 2000 is a leap year, 1900 and 2100 are not. JTIDS and USAF Airborne C&C systems calculate this incorrectly)

Importing date data from, or exporting to, other applications and/or systems using Leap y digit dates, and dates after 2000

____ ____ 21. Dates used internally in a segment conform to the CCYY format

Display of dates is clear and unambiguous

Printing of dates is clear and unambiguous

Input of dates is clear and unambiguous

Storage of dates is clear and unambiguous

Use of proportional-character printer forms or terminal screens which may overflow or line- with a 20xx year instead of a 19xx year

____ ____ 22. Do segments that relay date information externally (i.e. outside their segment) pass date information in the CCYY format.

____ ____ 22. Do the following dates process without causing system errors?

1995-10-01	Plans for 5 Fiscal Years or more extend to FY2000
1996-01-01	Four-year plans (budgets, op plans, strategies) end in 2000
1996-10-01	Plans for 4 Fiscal Years or more extend to FY2000
1997-01-01	Three-year plans extend to 2000
1998-01-01	Two-year plans extend to 2000
1999-08-22	GPS rolls back to 1980-01-06 (uses 1024-week cycle)
1999-09-09	9/9/99 flag for record deletion
2000-01-01	overflows 2-digit years
2000-01-10	first 9-character date
2000-10-10	first 10-character date
2000-02-29	Leap Year(1900 was not)
2001-01-01	Twenty First Century (not 2000)

____ ____ 23. Do the following dates process without system errors?

Crosses 1998-12-31 to 1999-01-01 successfully

Crosses 1999-09-09 to 1999-09-10 successfully

Crosses 1999-12-31 to 2000-01-01 successfully

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Year 2000 Assessment Checklist, continued

Crosses 2000-01-01 to 2000-01-02 successfully